



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Pecos District  
Carlsbad Field Office  
620 E. Greene  
Carlsbad, New Mexico 88220-6292  
[www.blm.gov/nm](http://www.blm.gov/nm)



**Mr. Phillip Goetze, P.G.**  
**Oil Conservation Division**  
**1220 South St. Francis Drive**  
**Santa Fe, NM 87505**

**Re: Sand Point State Well No. 2 – Sec. 01 T21S-R28E, 3980FSL & 1300FWL, Eddy County, New Mexico.**

Ladies and Gentlemen:

The Bureau of Land Management, Carlsbad Field Office, is objecting to the drilling of the Sand Point State Well No. 2 as a commercial salt water disposal well. The location is on fee surface land and state minerals. The BLM's objections are as follows:

1. The injection interval is not the Yates Formation as stated in the proposal. The formation in question may be the Capitan Formation or the Tansill Formation. Justification for this conclusion is provided in Tyrell (1969). In this publication, the Tansill, top of the Capitan Reef, and the Lamar are time correlative units that deposited at a similar time. The subject well is ~1 mile from the Capitan-basin margin as defined in Hiss (1975). Typically, the members of the Artesia Group pinch out toward the Capitan/basin margin. This fact, coupled with the succession of strata and the growth pattern of the Capitan Reef provides good justification that the Artesia Group pinches out from the lower Seven Rivers Formation all the way through to the Tansill Formation moving towards the Delaware Basin. It would make sense that only the Tansill and the top of the Capitan Reef exist in the vicinity of the proposal well.

2. The proposed injection interval is from 1300' – 1500', which would pose two substantial problems:

a. If allowed to inject undersaturated brine, the base of salt will be exposed and thus dissolved away, potentially causing rapid surface subsidence next to both a major highway (NM Hwy 62/180 towards Hobbs, NM) and the Carlsbad City Dump. The data to support this conclusion is based on inspection of gamma ray and neutron logs from the nearby Oxy Pronghorn State No. 1 API# 3001529778, the Rustler is ~794', Top of Salt at ~1100 feet, Base of Salt at ~1350', and Capitan at ~1500'. The formation between 1350 and 1500 feet, could be the Tansill or even the very top of the Capitan Reef. Here, the base of salt can clearly be identified between 1240 and 1350 feet. The proposed open hole injection interval will be in exposed salt.

b. The injection interval will adversely affect the Capitan Reef aquifer system

because the operator will not be injecting into the Yates, rather the Capitan Reef. Furthermore, there is not an effective aquitard or barrier to prevent migration of oil field brines from seeping into the Capitan Reef, thus contaminating the aquifer. Inspection of the above mentioned well log does not show any sign of an effective seal, plus there is not very much stratigraphy (<200 feet) between the base of the salt and the Capitan Reef. This is not a safe injection zone.

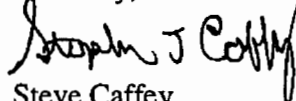
3. The porosity that the operator is proposing to utilize may be porosity due to fractures, caves, and dissolution of the above Salado Formation. In the Bell Federal No. 2 API# 3001520919, a large lost circulation zone was encountered at 950 to 1006 feet, in the Rustler Formation. In the completion report, a contingency casing was set to "cover cave zones". If allowed to inject at this interval, there may be adverse effects to cave and karst resources.

In order to protect the quality of natural resources, life and property, and promote responsible land use practices this objection is tendered.

The BLM will object to any injection at this depth, whether or not the well is drilled according to Federal standards. It is the recommendation from the BLM that this well not be allowed to inject at this interval and suggests that a deeper formation be targeted for injection.

If clarification is needed, please contact the signatory at 575-234-5925.

Sincerely,



Steve Caffey  
Assistant Field Manager-Lands & Minerals  
Bureau of Land Management  
Carlsbad Field Office

**cc: Mr. Joseph Galluzzi – Geologist**  
**New Mexico State Office**  
**301 Dinosaur Trail**  
**Santa Fe, NM 87508**